

#### April 8, 2005

TO	COMPANY	TELEPHONE	FACSIMILE
Examiner Max Noori	US Patent and Trademark Office Alexandria, Virginia		571.273.2185 AND 703.872.9306
FROM	COMPANY	TELEPHONE	FACSIMILE
Brian B. Shaw	HARTER, SECREST & EMERY LLP	585-231-1193	585-232-2152

TOTAL NUMBER OF PAGES SENT (INCLUDING THIS + OVER SHEET): 29 pages

#### MESSAGE OR SPECIAL INSTRUCTIONS:

As requested by Examiner Max Noori, we are retransmitting the Declaration of Prior Invention in the United States to Overcome Cited Patent Pursuant to 37 CFR 1.131.

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I hereby certify that this correspondence is beling facsimile transmitted to the United States Patent and Trademark Of ce, Attention Examiner Max Noori at facsimile number 571.273.2185 € rid at facsimile number 703.872.9306.

April 8, 2005 Date

Paula Weil

Typed or printed name of person signing Certificate Note: Each paper must have its own certifica :s of mailing, or this

certificate must identify each submitted paper.

ATTACHED ARE:

Declaration of Prior Invention in the United Stat is to Overcome Cited Patent Pursuant to 37 CFR § 1.131 (27 pages); Facsimile Cover Sheet (1 page)

> Attorney Dc :ket No.: 85939,000681 Confirmation No.: 7303

This collection of information is required by 37 CFR 1.8. The information is required to obtain or sain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1 4. This collection is estimated to take 1.8 minutes to complete, including gathering, preparing, and submitting the completed application form to the SPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestion information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Bo FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, 3 O. Box 1450, Alexandria, VA 22313-1450.

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If you need assistance in completing this form, call 1-80 -PTO-9199.

**PATENTS** 

JESSON WERE

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Confirmation No. 7303

Applicant:

Willett, Kevin R.

# :::y. Docket: 85939.000681

Serial No.:

10/670,827

E :aminer:

Noori, Max H.

Filed:

September 25, 2003 ----

A :: Unit:

2855

Title:

LABORATORY WEAR AND DRAG FORCE "ESTING SYSTEM

Declaration of Prior Invention in the United States to Overcome Cited Patent Pursuant to 37 CFR §1.13 ]

Commissioner for Patents PO Box 1450 Alexandria, VA 22313-1450

- I, Kevin R. Willett, the Inventor in the above-referenced application hereby declare as follows:
- 1. This Declaration is to establish conception of the invention of this application in the United States at a date prior to Fet 'uary 24, 2003, which is the effective date of US Patent No. 6,715,336 as cite by the examiner, and due diligence from a date prior to the effective date of U. i. Patent No. 6,715,336 to filing the present application.
  - 2. I am the sole inventor of the present application.

- 3. To establish the date of conception of the invention of this application, the following attached documents are abmitted as evidence:
- (a) A redacted memo to laboratory manager Debbie Massey outlining the objectives and requirements of the presently claim it system. The memo is signed by Ms. Massey. The memo was signed prior to February 24, 2003 and the date has been redacted. This memo was prior : assignment of a project number and thus, identifies the project as SSTC Lal pratory Abrasion Testing Machine:
- (b) A redacted review of meeting presentation, including 7 pages of figures, with attendee signatures of Ms. Massey, Te ! Walker, Randy Kincaid and myself. The review of meeting presentation was signed prior to February 24. 2003 and the date has been redacted. The present illon is entitled 0141B Laboratory Abrasion Tester Design. (The figures ge: erally corresponding Figure 2-8 and non-exploded views of figures 9-17 of the present application).
- (c) A redacted request for quote signed by Timessee Tool & Engineering, Inc., which quote includes the project 1:01418 and a brief written description of the components. The quote is dated : rior to February 24, 2003 and has been redacted to remove the date.
- (d) A redacted quote from Cornerstone Tech cal Group, Inc. of Franklin, Tennessee to construct a prototype test stand. The : uote is dated prior to February 24, 2003 and has been redacted to remove the date.
- (e) A redacted request for quote from Axis Fi lirication & Machine Co. for project 0141B for module fabrication. The request is dated prior to February 24, 2003 and has been redacted to remove the date
- (f) A redacted figure of the controller connected to three testing modules. The figure is dated prior to February 24, 2:103 and has been redacted to remove the date. This figure generally correspon is to Figure 1 of the present application.

- 4. From these documents it can be seen that the conception of the invention in this application was prior to February 24, 2003, the effective date of the Xu reference (U.S. Patent 6,715,336).
- 5. Diligent efforts in reducing the invention operactice were made from prior to February 24, 2003 through the September 5, 2003 filing date of the present application. These efforts included:
  - (a) preparing additional requests for chotes for vendor support on specific components of system;
  - (b) analyzing and responding to subn ited quotes;
  - (c) internal financial approval process :;
  - (d) continued development of project in parallel with prototype construction;
  - (e) preparation of formal Invention Distlosure; and
  - (f) working with patent counsel to prenare and file the present application, including review of a prurality of application drafts.
- 6. The attached memos, drawings, presentat tins and this declaration establish that the invention was conceived prior to F spruary 24, 2003 and through due diligence was constructively reduced to practice on September 23, 2003 by the filing of the present application.
- 7. All activity establishing the date of concep ion and diligence occurred in the US.
- 8. This declaration is believed timely filed as the filing is before a final rejection.

9. I hereby declare that all statements made of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made vith the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United State code, and that such willful false statements may Jeopardi :e the validity of the application and any patent Issued thereon.

FAX NO. 585 232 2152

Sworn to before me this 18day of March



To: Debbie Massey

Laboratory Manager - SSTC

From: Kevin Willett

Date:

Subject: SSTC Laboratory Abrasion Testing Machine Requirements

For your consideration, the following are objectives and requirements: defined in our meeting on

Project Name: SSTC Laboratory Abrasion Tester

#### Objectives:

Design, Fabricate and Develop a multi-functional Abrasion testing marrine. The machine's design shall allow for the testing of weather-strips using various type of abrading ar :aratus (i.e. Glass Abrasion, Cloth Scrub Abrasion and Crock Abrasion) as per Automotive customer spec fications.

#### Requirements:

- Unit must be capable of testing up to three (3) samples at one time
- Unit must provide a stable method of securing sample to machine:
- Unit must maintain sample in a stationary position
- Unit must provide an accurate and stable means for applying known force weight
- Unit must allow for various types of sample fixturing
- Unit must be capable of applying a force weight of no less than 30 grams and no more than 12 kgs
- Unit must be capable of applying a water/muddy water solution : each sample during operation
- Unit must be capable of measuring the drag force of each of the samples tested during operation
- Unit must provide a means of easy visual inspection of each sat ple at intervals during testing
- Unit must provide a means for repeatable tool-free set-up and of cration.
- Unit must be capable of operating at a temperature range of -20 17 to 180°F
- Unit must allow for use of various types of abrasion heads
- Unit must be capable of 0 to 600 cycles per minute (0 to 10 Hz)
- Unit must be capable of tooless adjustable stroke
- Unit footprint to be no larger than 600mm depth x 900mm widt (23.6in depth x 35.4in width)
- Unit is to operate on 120VAC 60Hz
- Unit is to be controlled and data acquired by a Programmable P C
- Acquired data to be downloaded via Ethernet connect to SSTC: etwork

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#### Additional functions to be considered:

Use of cameras to inspect samples during machine operation to reduce shutdowns for visual inspection.

If you agree with the above requirements and wish to proceed with the Project, please sign and return.

Deboral Massey

Debbie Massey

Date

Thank you for your consideration,

Kevin-Willett

Senior Development Engineer

Metzeler Automotive Profile Systems

Technical Center



To: Debbie Massey

From: Kevin Willett

Date:

Subject: 0141B Laboratory Abrasion Tester Design Concept Review Summary

Review Date:

Attendees:

Kevin Willett - Presenter

Debbie Massey - Lab Manager

Ted Walker - Testing

Randy Kincaid - Lab Technician

Thank you for your consideration and input.

Best Regards.

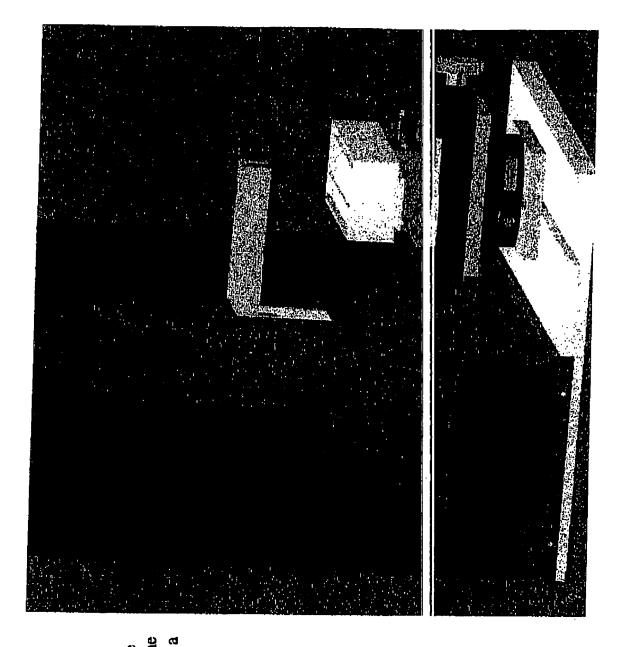
Kevin Willett

Sr. Development Engineer Technical Center

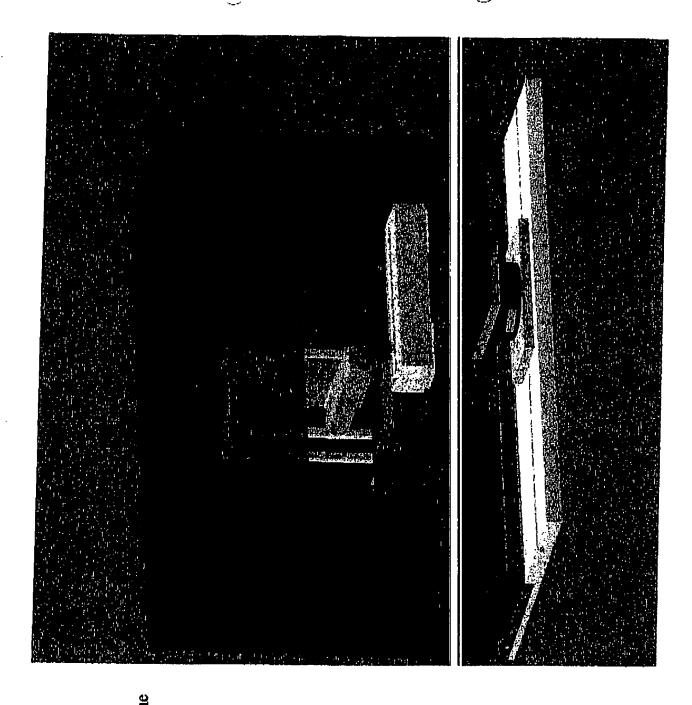
Cc:

Ted Walker Randy Kincaid John Rigby Cedric King

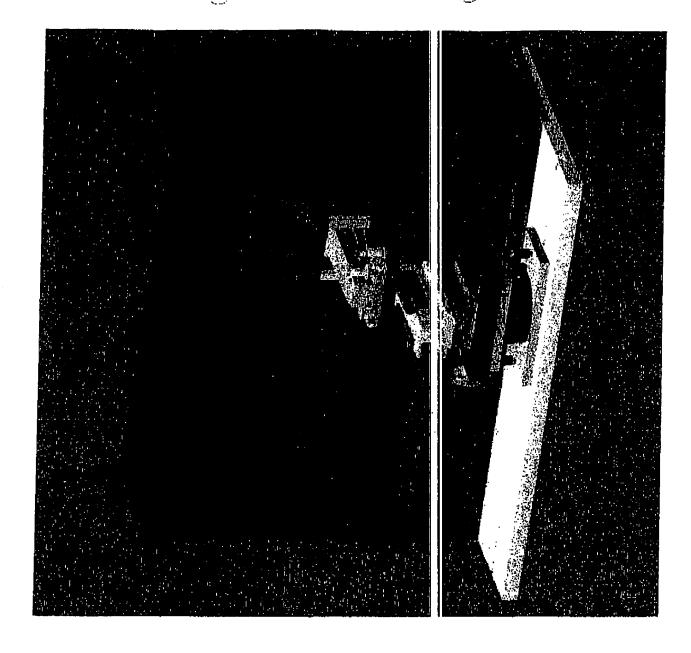
Module Setup and Operation



sample and then apply a glass until it touches the In this setup, the machine will lower the Glass Abrasion

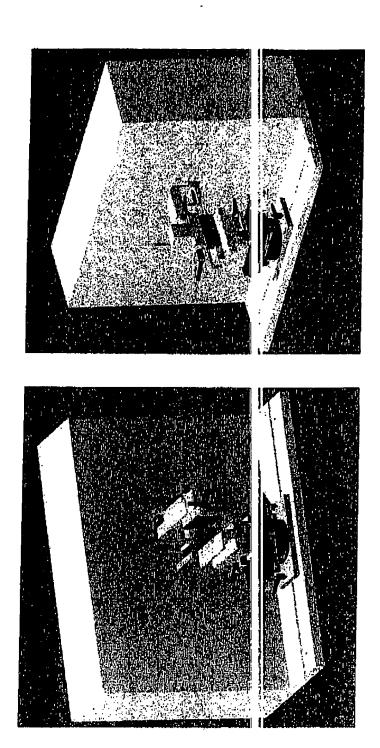


back and forth over the In this setup, the machine will traverse sample at the set frequency for the required number of cycles. Glass Abrasion



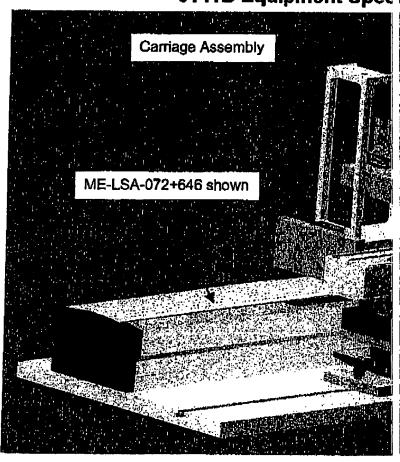
sample and then apply a machine will lower the the pad will traverse in one direction, then lift 300 gram load. Then until it touches the Fabric Scrub fabric covered pad In this setup, the and return.

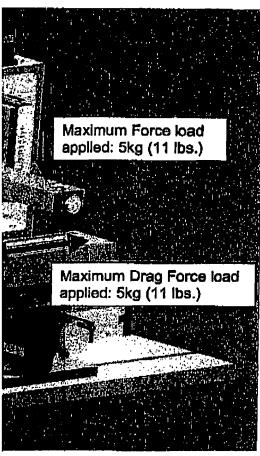
Additional test such as Ford Motor Company's Slam and Vibration testing can be performed on this machine using similar setups and routines.





# 0141B Equipment Spec ifications





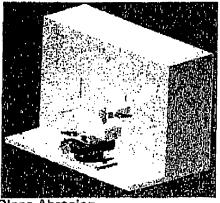
### Required Cycling:

## Test #1 (Glass Abrasion)

Stroke: 150 mm

Cycle rate: 60 per minute (1 cycle = forward and back stroke

Force Load: 5 kg maximum Drag Load: 5 kg maximum



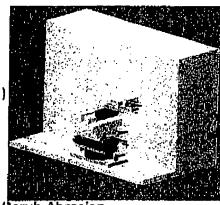
Glass Abrasion

#### Test #2 (Fabric Scrub Abrasion)

Stroke: 100mm

Cycle rate: 15 per minute (1 cycle = forward stroke lift and return)

Force Load: 300 grams Drag Force: Not Available



Scrub Abrasion

### Test #3 (Slam Abrasion)

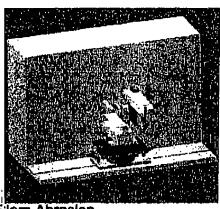
Stroke: 75mm

Cycle rate: 300 per minute

(1 cycle = forward and back stroke, no load on back stroke)

Force Load: N/A

Drag Force: 5 kg maximum



lam Abrasion

#### Test #4 (Vibration Abrasion)

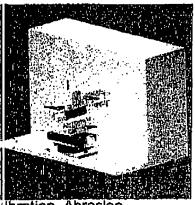
Stroke: 3mm

Cycle rate: 600 per minute

(1 cycle = forward and back stroke, no load on back stroke)

Force Load: N/A

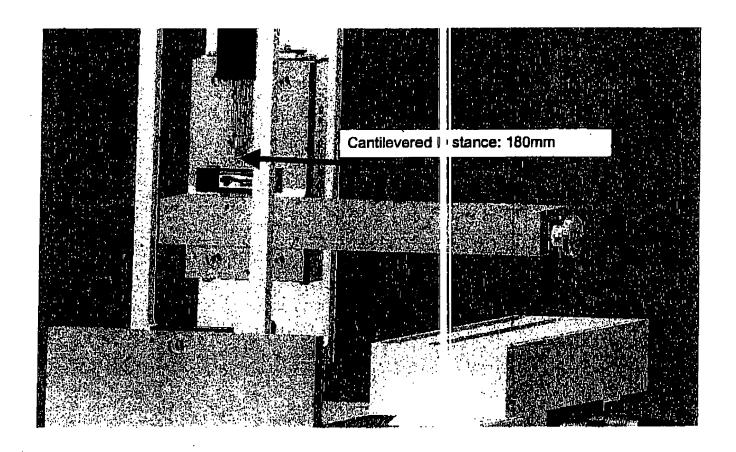
Drag Force: 5 kg maximum



Ibration Abrasion



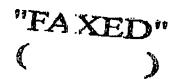
Dynamic Load: approx. 7.5 kg (weight of Carriage Assembly



Technical Center 2200 Stock Creek Blvd. Rockford, Tennessee 37853 Phone: (865) 977-0116 Fax: (865) 977-1663

ATTEN	DANCE RECORI	
Type Meeting: 0141B SSTC La Date of Meeting: Time to Meeting:	aboratory Abrasion	l'ester Concept Review
Sign-Off		
Participant Names		
1. le // Lak	16	
2. Aborah Massey.	17.	
3. Rand 8 X		
4. X - 720000	. 19	
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14.	29.	
Visitor(s):		• • • •
•		
•	<del></del> -	

Attendance Sheet.doc Rev. 1 METZELER Automotive Profile Systems



# Request For Quota

Date:

Requestor: Kevin Willett

Technical Center

Vendor: Tennessee Tool & Engineering

ı	Quantity	177ACIQUE	
ł		Description	
ı	<b>د</b> .	0141B-02.10.24 Modules fabricated per 0141B-02.10.24 (N. sinds	Cost
ı		Assembly) drawing specifications	
٦	N/amala A		8500.00
	MCCGCICL WILL	omotive to supply through 3 <sup>rd</sup> party vendor the Linear	\$500.00 ea.

arty vendor, the Linear servo r tuators and load cells. A 3rd party controls company will be used. Outfitting of control will be done prior to not ittle shipment.

Quantity	Tooling	_	
Z ====================================	Description		
3	0141B-02.10.28 Fabric Scrubber Head fabricated per 0141B- (Fabric Scrubber Sub-Assembly) drawing specifications	12.10.28	Cost
3	VIVID-VC.1V.29 Glass approxima Fred Scholested was 01415	.10.29 (Glass	\$3,420.00 ea.
3	0141B-02.11.19 Vaccium Block Confest	ر.ــــــــــــــــــــــــــــــــــــ	\$3.600.00 ea.
3	0141B-02.11.19 (Vacuum Block Sub-Assembly) drawing spc 0141B-02.12.12 Paint Panel Holder fabricated per 0141B-02.12.12 (Paint Panel Holder Sub-Assembly) drawing 0141B-02.12.12 (Paint Panel Holder Sub-Assembly) drawing		\$3,750.00 ea.
3	0141B-02.12.05 (Quick Clarup Flange Mount fabricated per 0141B-02.12.05 (Quick Clarup Flange Mount Detail) As an	pecifications	\$4,500.00 ea.
	specifications	,	\$4,150.00 ea.

i	Quantity	Consumables	
	50	Description 0141B-02.10.28-02 Scrub Fabric cut per 0141B-02.10.28-02-0 (Fabric	Cost
		Layout Detail) drawing specifications. Metzeler Automotive w   supply fabric required.	
1	50	0141B-02.10.28-04 Abrasion Glass cut per 0141B-02.10.28-04 Abrasio	
L		Glass Detail) drawing specifications	
			\$250.00 ea.

\$19,500.00 each assembly

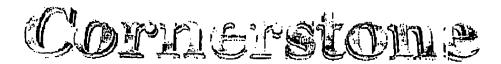
Note: Complete price breakdown will be provided if a sarded this job.

0141B Abrasion Tester RFQ

ŀ

Quoted to: METZELER AUTOMOTIVE

2200 Stock Creek Blvd Rockford, TN 37853



# Technical Group Inc.

Quotation

Quote Number: willetk.

Quote Date:

Attn: Kevin Willett
Delivery: 16 Weeks ARO
FOB: FACTORY

Page:

	Quantity	Item	Description	Unit Price	Extension
	1,00	Err 20 doug from short	METZELER TESTSTAND to Include:	36,499.00	36,499.00
net 3	0. Any cancellati	on of an order is sub	ect to a restocking charge.	Total	Continued

Submittal of a purchase order is indication of acceptance of our terms and conditions. Our terms are available upon request or available at

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120 Holiday Court, Suite 4, Franklin, TN 37067 Ph: (615) 599 :080 Fax: (615) 599-5090

# Technical Group Inc.

Quotation

Quote Number. willetlc.

Quote Date:

Page:

Quoted to: METZELER AUTOMOTIVE

2200 Stock Creek Blvd Rockford, TN 37853

Attn: Kevin Willett Delivery: 16 Weeks ARO FOB: FACTORY

Quantity	Item	Description	Unit Price	Extension
3.00	ME-LSA-072-B646L-110	Transducer Techniques Load Cell Model MI -75 THK Linear Motor Stage w/Bearings, Foodback, C 1-le	6,868.00	20,604.00
3.00	EN-208-00-000	Carrier, and Flying Load Cables EMERSON CT	1,490.00	4,470.00
3.00	FM-3DN	Digital Servo Drive, 9 amp cont., 18 amp pea EMERSON Programming Module with DeviceNet	1,235.00	3,705.00
1.00		CORNERSTONE 750MHz Industrial PC w/ Windows XP, 75pt Control/View Development/Runtime Software DeviceNET Scanner, Keyboard, Mouse, Touchscreen, and IO	8,998.00	8,998.00
			0.00	
ation is vali ny cancella	d for 30 days from the quotat tion of an order is subject to a	ion date. Please note that our terms are 1%10 a restocking charge.	Total	74,276.00

Submittal of a purchase order is indication of acceptance of our terms and conditions. Our terms are available upon request or available at ttp://www.cornerstonetechnical.com/CTGTermsandConditions.pdf

E is appreciate your business.

120 Holiday Court, Suite 4, Franklin, TN 37067 Ph: (615) 599 :1080 Fax: (615) 599-5090



# Request For Quote

Date:

Requestor: Kevin Willett

Vendor: Axis Fabrication & Machine Co.

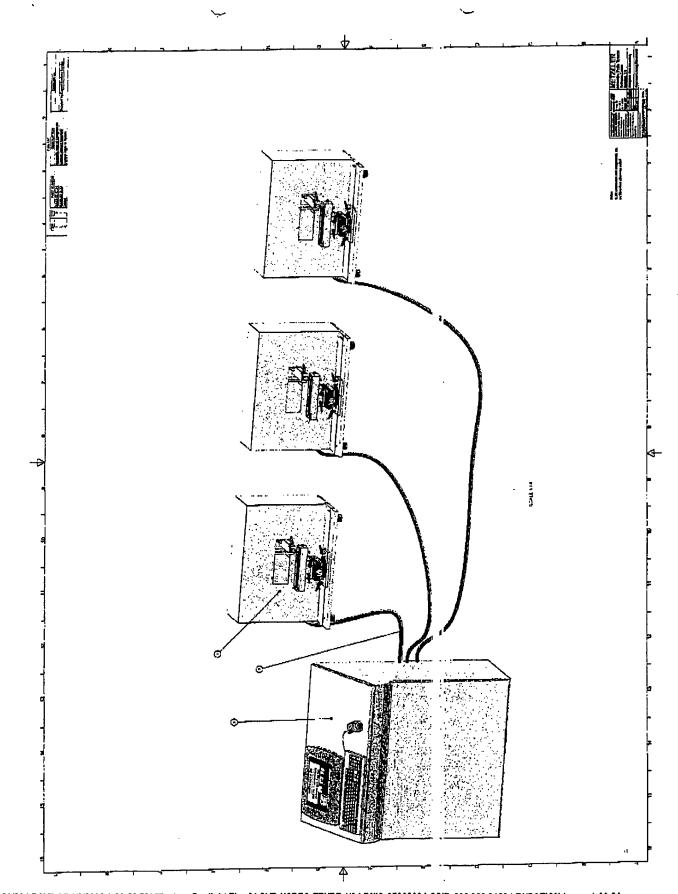
Machine Quantity Description Cost 0141B-02.10.24 Modules fabricated per 0141B-02.10.24 (Mod 1: Assembly) drawing specifications 800 Metzeler Automotive to supply through 3rd party vendor, the Linear serve act. 1016 and load cells. A 3rd party controls company will be used. Outfitting of control will be done prior to mod 1: shipment

Tooling

If Whit-

O	Toomig		
Quantity	Description	•	Cost
3	0141B-02.10.28 Fabric Scrubber Head fabricated per 0141B-02 (Fabric Scrubber Sub-Assembly) drawing specifications	0.28	1012
3	0141B-02.10.29 Glass abrasion Hoad fabricated per 0141B-02.1 Abrasion Head Sub-Assembly) drawing specifications	29 (Glass	5500
3	0141B-02.11.19 Vacuum Block Head fabricated per 0141B-02.11.19 (Vacuum Block Sub-Assembly) drawing coasis	utions	47000
3	0141B-02.12.12 Paint Panel Holder Sub-Assembly Assembly		1725-
3	0141B-02.12.05 Quick Clamp Flange Mount fibricated per 0141B-02.12.05 (Quick Clamp Flange Mount Detail) drawing specifications	Meannis	162000

0	Consumables	
Quantity 50	Description 10141B 02 10 25 02 B and 15 15 15 15 15 15 15 15 15 15 15 15 15	Cost
	0141B-02.10.28-02 Scrub Fabric cut per 0141B-02.10.28-02-02 ( 'abric Layout Detail) drawing specifications. Metzeler Automotive will apply fabric required.	the 35000
50	0141B-02.10.28-04 Abrasion Glass out per 0141B-02.10.28-04 (a frasion Glass Detail) drawing specifications	1400 00



PAGE 29/29 \* RCVD AT 4/8/2005 4:23:53 PM [Eastern Daylight Time] \* SVR:USPTO-EFXRF-1/2 \* DNIS:8729306 \* CSID:585 232 2152 \* DURATION (mm-ss):09-24

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